

## TEST PLAN

*Rec'd 3 Aug 70*

25X1

☐ MLT 1540 Light Table - Pre-Production Model

25X1

Ref. Test & Evaluation Report - ☐ 1540 Split-Format Light Table  
Mod II (NPIC/R-46/70)1. Introduction

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1.1 The first production model of the ☐ MLT 1540 Light Table is scheduled to arrive on or about 1 October 1970. This table is the culmination of 18 months of development, testing, and re-work. It is to be the standard for the table procurement package of 389 tables. As stated in the contract, "All instruments delivered under this Contract shall also meet or exceed the requirements of this specification (i.e., Technical Requirements for the Production of the ☐ 1540 Split-Format Light Table and Mount for Various Microstereoscopes) or performance of the accepted pre-production model."

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1.2 It is important that this table be given a thorough testing, especially in regard to those features which were unacceptable when last tested (see reference). This will insure that the tables delivered will meet the high expectations of the community for this equipment.

2. Performance Testing

2.1 Those features which were found unacceptable in the April testing will be tested individually to insure that they have been modified and are in good order.

2.2 The testing of these features will be documented in a report supplementary to that written on the April test series.

3. Operational Inspection

3.1 In order to further assure PI compatibility with this item, the operating divisions will be asked to participate in a very brief operational inspection. By this method, the changes in the item which meet performance specifications but are not operationally suitable can be corrected.

3.2 The operational components which participated in the April evaluation of the prototype will be asked to participate. Each component will be given 4 hours with the unit in the individual component's area. It must be understood at the outset that only 2 classes of changes can be accomplished at this time: 1) Changes without which the light tables cannot be effectively used, or 2) Minor changes which can be accommodated without appreciable delay of production schedule.

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#### 4. Acceptance Test Procedures

4.1 Equipment Performance Branch, ESD will be requested to assist TEB in formulating Acceptance Test Procedures for use on all incoming production units. This work must be accomplished prior to delivery of the first unit.

4.2 The pre-production unit will be used as a test bed for these procedures to insure efficiency of the testing and rapid delivery of the accepted units to the operating components.

4.3 The pre-production model will be a completely motorized unit, as specified for IEG/NPIC. There are two other configurations which will be delivered to NPIC for DIAAP-9 and SPAD. NPIC will perform acceptance testing on these units, using the standard procedures (where applicable) and the contractual specifications for these components which differ from the pre-production configuration.

#### 5. Scheduling

5.1 The attached schedule has been coordinated within TSG and with the operating components. The actual delivery date is unknown at this time, therefore elapsed time from arrival, and not dates, are used.

5.2 If deviations from the schedule are required, this should be coordinated with TEB. All affected components will be notified in this eventuality.

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Prepared by

Approved by

Ch/TEB/ESD

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(Working Days)

EVENT	1	2	3	4	5	6	7	8	9	10	11	12	13
UNIT ARRIVAL, INSPECTION	12	13	14	15	16	19	20	21	22	23			
PERFORMANCE TESTING OF CHANGES													
OPERATIONAL INSPECTION													
ACCEPTANCE TEST SHAKE-DOWN													

Acceptance

(By EPB)

REPORT

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MLT 1540 LIGHT TABLE  
PRE PRODUCTION MODEL TEST SCHEDULE

MIL-E-4158D(USAF)

3.5.6.2 Welds, resistance, electrical interconnections.- Welds, resistance, electrical interconnections shall be in accordance with MIL-STD-454, Requirement 24.

3.6 Nomenclature, identification, marking and labels.

3.6.1 Nomenclature (item name and type designation).- The criteria for standardized nomenclature (item name and type designation) shall be in accordance with MIL-STD-454, Requirement 34.

3.6.2 Identification marking.- The equipment and subsidiary levels through parts shall be marked for identification purposes in accordance with MIL-STD-130.

3.6.3 Reference designations.- Unless otherwise specified (see 6.2.u.) each part having electrical circuits or connections shall be identified by an appropriate reference designation in accordance with ASA Y32.16 1965. The reference designation shall be marked on the chassis, or other mounting surface; but if space is not available, the reference designation shall be marked on the part itself, provided it is not a replaceable part. The reference designations shall be the same as those used for identifying parts on all type of data including, drawings, diagrams, and spare parts lists prepared for the equipment.

3.6.3.1 Fuses and lamps.- Reference designations shall not be marked on fuses or lamps. The reference designation of the fuse or lamp shall be marked adjacent to the fuse holder or lamp socket. Where space is limited, as in the case of panel mounted fuses and lamps, the reference designation of the fuse holder or lamp socket may be omitted to provide space for the reference designation and rating of the fuse or lamp.

3.6.3.2 Electron tubes, transistors, and crystal units.- Reference designations shall not be marked on electron tubes, transistors, or crystal units. The type number and reference designation of each tube or crystal unit shall be marked adjacent to the tube or crystal-unit socket, on the plug-in side of the chassis. The reference designation for the socket shall be marked on the reverse side of the chassis adjacent to the socket. When space is not available for marking the required tube and crystal unit reference designations and type numbers, a suitable label showing location of the tubes and crystal units and the corresponding reference designations shall be mounted inside the chassis, where it will be readily visible when viewing the tubes and crystal units in place.

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3.6.3.3 Other electrical parts.- On subminiaturized assemblies integrated circuits, printed or etched boards or other form of assembly where space is at a premium, the reference designation need not be marked. In lieu thereof, reference designation marking shall be shown by means of pictorial diagram, line drawings, photographs or other media to provide for circuit identification (by means of reference designations) in the appropriate handbooks for the equipment. Parts of nonrepairable subassemblies will not be marked with reference designation.

3.6.3.4 Nonelectrical parts.- The reference designation for each nonelectrical part, except screws, nuts, washers, bushings, pipe fittings and similar small hardware, shall be marked on the chassis, frame, panel, et cetera, immediately adjacent to the part; but if space is not available, the reference designation shall be marked on the part itself.

3.6.4 Panel markings.- The visible surface adjacent to panel facilities such as connectors, controls, indicators, jacks, keys, switches and fuse holders shall be marked with a suitable word, phrase, or abbreviation, indicating the use or purpose of the part. These markings shall be legible so that the function of the panel facility can be identified by the operator. Continuously variable operating controls shall be provided with markings that permit the operator to set the control to a pre-determined point.

3.6.5 Visibility.- Reference designations and type numbers shall be located so that they are visible with minimum removal of cases, covers, shields, or adjacent parts. Wherever practicable, parts shall be mounted so that their identification markings will be visible with minimum disassembly of the equipment.

#### 3.6.6 Labels

3.6.6.1 General.- Labels showing wiring and schematic diagrams, operating frequency, lubricating and operating instructions, safety notices, list of tools, list of contents, and similar information shall conform to the following.

3.6.6.1.1 Lettering.- Lettering shall be in gothic (upper case), with a minimum height of 3/64-inch.

3.6.6.1.2 Border.- Lettering or figures shall not be closer than 1/4-inch to the edge of the label.

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3.6.6.1.3 Material and process.- Material and process for labels shall conform to the following (as applicable):

a. Aluminum, brass, or copper with markings applied by etching, machine engraving, die stamping, lithographing, printing, or silk screening.

b. Adhesive backed metal foil identification plates, shall be in accordance with MIL-P-19834.

c. Printed on white book paper laminated between two sheets of clear, transparent, polyvinylchloride plastic sheets. The two sheets shall be bonded together to seal against moisture and shall withstand the climatic conditions specified in the equipment specification.

d. Photo printed in light-dark color contrast on opaque polyethyleneterephthalate plastic sheet and covered with a clear transparent sheet of the same material. Both sheets shall be adhesive-backed with adhesion characteristics resulting in a permanent moisture proof bond between mounting surface, label, and cover sheet and shall withstand the climatic conditions specified in the equipment specifications.

3.6.6.1.4 Legibility.- Labels shall be legible and shall be designed to retain legibility for the service life of the equipment.

3.6.6.1.5 Mounting.- Labels shall be securely and permanently mounted in a manner which shall not stain the labels under specified service conditions. They shall be mounted so that they are not obstructed from view by units or parts.

3.7 Workmanship.- Workmanship shall be in accordance with MIL-STD-454, Requirement 9.

#### 4. QUALITY ASSURANCE PROVISIONS

4.1 Requirements for sampling, inspection, and test procedures shall be as specified in the detailed equipment specification or work statement (see 6.2.v.).